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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
ANDERSON, DENISE R	

ART UNIT	PAPER NUMBER
1797	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/573,061	BEN-HORIN, RAANAN	
	Examiner	Art Unit	
	Denise R. Anderson	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 June 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-6* is/are rejected.

7)☒ Claim(s) *3* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 May 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 4, 2008 has been entered.

Drawings

3. Applicant amended the specification and Figure 2 to identify the piston assembly 128 and the previous objection is withdrawn.

4. The minor informalities referred to in the Advisory Action have also been corrected so no new objections to the drawings will be made.

Claim Objections

5. Claim 1 is objected to because of the following informality: In line 13, "an assembly (200) for" is recited; however, in the specification, ¶ 20, line 5, reference part

200 is a seat member. In the patentability analysis below, the examiner assumes claim 1 reads "an assembly for." Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sadan et al. (US Patent No. 6,398,037 B1), in view of Clark et al. (US Patent No. 3,515,415).

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sadan et al. (US Patent No. 6,398,037 B1), in view of Clark et al. (US Patent No. 3,515,415) as applied to claim 5 above, and further in view of Orberg et al. (Erik Orberg et al., "26th Edition Machinery's Handbook," pub. Industrial Press Inc., New York, 2000, of particular relevance is the example shown, starting on page 300).

8. To summarize the claim 1 patentability analysis below, Sadan et al. discloses the claimed invention except that the split ring and trough are integrated, as opposed to separable. Clark et al. teaches the separable split ring and trough. Clark et al., Figures 1 and 2, where the split ring is nut body portion 3 and ring portion 4 – and the trough is collar 6. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the Sadan et al. split ring and trough separable as taught by Clark et al., since Clark et al. states at Column 1, lines 32-44, that such a modification provides a way to join two pipe-like structures, like the recited inlet port and filter of claim 1.

9. Sadan et al., in view of Clark et al., discloses the claimed invention except that the trough sides are perpendicular instead of slanted slightly inwards. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the Sadan et al. trough sides slant in slightly as opposed to making them perpendicular since the two designs are equivalent. In summary then, Sadan et al., in view of Clark et al., discloses or suggests all claim 1 limitations.

10. A second claim 1 rejection can also be made. Sadan et al. discloses the claimed invention except that the split ring and the trough are integral and applicant makes them separable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the split ring and trough separable, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

11. The claim 2 limitations that were incorporated into claim 1 are then addressed by Clark et al.. In summary, then, Sadan et al., in view of Clark et al., discloses or suggests all claim 1 limitations.

12. In the element-by-element patentability analysis below, the following table identifies the Sadan et al. and Clark et al. reference parts that are equivalent to applicant's split ring, male screw thread, abutment ring, and trough. These are the four elements in the limitation that applicant argues is not disclosed in the prior art.

	Applicant reference part number in	Sadan et al. Figures 1 and 2	Clark et al. Figures 1 and 2

	Figures 2 and 3		
Female screw-headed split ring	202	Female thread portion of ring 82	Nut body portion 3 and ring portion 4 with threads 5.
Male screw thread	Male thread on abutment ring 138	Male screw thread on integral part referenced as "flange 36 combined with . . . ring 38." Column 3, lines 18-19.	Threads 7.
Abutment ring	138	Flange 36 combined with . . . ring 38." Column 3, lines 18-19.	Flange 2.
Trough	200b	Ring 82 minus the female thread portion	Collar 6.

13. An element-by-element matching of the claim limitations to the prior art is shown below. The claims appear in italics and the prior art and examiner's comments are in normal font.

Claim 1 (Currently Amended): A liquid filtering device (110), particularly for irrigation water installations (Sadan et al., Column 1, lines 5-7) *comprising:*

a housing (112, 114) (Sadan et al., Figures 1 and 10, two-member housing 12 and 14) *with an inlet port (120)* (Sadan et al., Figure 1, inlet port 16 and Figure 10, port 20) *and an outlet port (116)* (Sadan et al., Figure 1, outlet port 20; Figure 10, designated by arrow at bottom of part);

a core member (124) (Sadan et al., Figures 1, 2, and 10, core member 24) *centrally mounted within the housing comprising at one axial end thereof an abutment ring (138)* (Sadan et al., Figures 1, 2 and 10, flange 36 and screw-threaded ring 38) *associated with a male screw-thread for mounting*

the core member (124) to the housing (114) next to and in communication with the inlet port (120);

a discs-type filter member (170) (Sadan et al., Figures 1 and 10, filter discs battery 70) *supported by the core-member (124) so that water flowing from the inlet port (120) enters the filter member in a radial direction, and is discharged through the outlet port (116), and vice-versa during reversed, filter flushing flow cycles;*

a piston assembly (140) (Sadan et al., Figure 1, piston assembly 28) *mounted to the core member (124) comprising a piston (158)* (Sadan et al., Figure 1, piston 58) *and a displaceable member (160)* (Sadan et al., Figure 1, coil spring 52) *coupled to the piston and abutting against the filter member at the other axial side thereof;*

wherein an assembly (200) for the mounting of the core member (124) comprises a female screw-threaded split ring (202) (Sadan et al., Figure 1, the female thread area of ring 82; Clark et al., Figures 1 and 2, nut body portion 3 and ring portion 4 with threads 5) *matching the male screw-thread* (Sadan et al., Figure 1, male screw thread on male screw threaded ring 38; Clark et al., Figures 1 and 2, threads 7 where "threads 7 and 5 are engaged in the usual manner" as stated in Column 2, line 25)*; and*

a circular convergent cone shaped trough (200b) (Sadan et al., Figure 1, ring 82 minus the female thread area; Clark et al., Figures 1 and 2, collar 6) *encompassing the split ring* (Sadan et al., Figure 1, the female thread area

of ring 82; Clark et al., Figures 1 and 2, nut body portion 3 and ring portion 4 with threads 5) *and fixedly mounted to the housing* (Sadan et al., Figures 1 and 10, two-member housing 12 and 14), *the arrangement being such that upon threading together, the split-ring* (Sadan et al., Figure 1, the female thread area of ring 82; Clark et al., Figures 1 and 2, nut body portion 3 and ring portion 4 with threads 5) *is attracted towards the abutment ring (138)* (Sadan et al., Figures 1, 2, and 10 flange 36 with screw-threaded ring 38; Clark et al., Figures 1 and 2, flange 2) *and thus becomes self-tightened against the cone-shaped wall of the trough.*

wherein said trough (Sadan et al., Figure 1, ring 82 minus the female thread area; Clark et al., Figures 1 and 2, collar 6) *is open at at-least one side thereof allowing the split ring* (Sadan et al., Figure 1, the female thread area of ring 82; Clark et al., Figures 1 and 2, nut body portion 3 and ring portion 4 with threads 5) *to be inserted thereinto by elastically squeezing same into a smaller diameter.*

Sadan et al. discloses the claimed invention except that the split ring and trough are integrated, as opposed to separable. Clark et al. teaches the separable split ring and trough. Clark et al., Figures 1 and 2, where the split ring is nut body portion 3 and ring portion 4 – and the trough is collar 6. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the Sadan et al. split ring and trough separable as taught by Clark et al., since Clark et al. states at Column 1, lines 32-44, that such a

modification provides a way to join two pipe-like structures, like the recited inlet port and filter of claim 1.

Sadan et al., in view of Clark et al., discloses the claimed invention except that the trough sides are perpendicular instead of slanted slightly inwards. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the Sadan et al. trough sides slant in slightly as opposed to making them perpendicular since the two designs are equivalent.

In summary, Sadan et al., in view of Clark et al., discloses or suggests all claim 1 limitations.

A second claim 1 rejection can be made on the basis of the above element-by-element analysis. Sadan et al. discloses the claimed invention except that the split ring and the trough are integral and applicant makes them separable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the split ring and trough separable, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

Sadan et al., in view of Clark et al., discloses the claimed invention except that the trough sides are perpendicular instead of slanted slightly inwards. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the Sadan et al. trough sides slant in

slightly as opposed to making them perpendicular since the two designs are equivalent.

In summary, Sadan et al., in view of Clark et al., discloses or suggests all claim 1 limitations.

14. With regards to dependent claims 3-5, the claims appear below in italics and the prior art and examiner's comments are in normal font.

Claim 3. The device as claimed in claim 1 wherein the said trough is integrally formed with a fitting communicating the core member with the inlet port of the filter member.

Sadan et al., in view of Clark et al., discloses or suggests all claim 1 limitations and, in Figure 10, teaches that the inlet port 20 communicates with the core member (Figure 1, core member 24) through a fitting.

Claim 4 (Currently Amended): The device as claimed in claim 3, wherein a stop is provided within the trough for avoiding free rotation of the split ring.

Sadan et al., in view of Clark et al., discloses or suggests all claim 3 limitations. In Figure 1, Clark et al. further teaches a stop to avoid the free rotation of the split ring in the form of a "collar 6." The "collar 6" slides over the "ring portion 4" and is "held there by friction." "Thereafter, threads 7 and 5 are engaged in the usual manner. Collar 6 now holds the nut [applicant's split ring] in a fixed circular configuration." Clark et al., Column 2, lines 23-27. It would have

been obvious to one having ordinary skill in the art at the time the invention was made to have included a stop in the Sadan et al. device, as taught by Clark et al., since Clark et al. states at Column 2, lines 26-27 that such a modification would "hold the nut (applicant's split ring) in a fixed circular configuration," i.e. avoid the free rotation of the split ring. In summary, Sadan et al., in view of Clark et al., discloses or suggests all claim 4 limitations.

Claim 5 (Currently Amended): The device as claimed in claim 1, wherein the piston assembly is provided with means for limiting the progress amount of the piston.

Sadan et al., in view of Clark et al., discloses or suggests all claim 1 limitations and further teaches a means for limiting the progress amount of the piston in the form of a spring 52 in Figure 1.

15. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sadan et al. (US Patent No. 6,398,037 B1), in view of Clark et al. (US Patent No. 3,515,415) as applied to claim 5 above, and further in view of Orberg et al. (Erik Orberg et al., "26th Edition Machinery's Handbook," pub. Industrial Press Inc., New York, 2000, of particular relevance is the example shown, starting on page 300). The claim appears below in italics with the prior art and examiner's comments in normal font.

Claim 6 (Currently Amended): The device as claimed in claim 5, wherein said means comprise a coil spring, the number and size of the coils being designed

so as to limit the stroke of the piston following a predetermined compression thereof.

Sadan et al., in view of Clark, discloses or suggests all claim 5 limitations. It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the spring to limit the stroke of the piston since it was known in the art how to design springs to compress a given length when under a given load. Orberg et al. provides such an example, starting on page 300. The spring is to compress from 2-1/2 inches to 1-1/4 inches under a 36-pound load. The number and size of coils in the spring is determined.

Response to Arguments

16. Applicant's arguments filed June 4, 2008 have been fully considered but they are not persuasive.

a. Applicant argues that a limitation in claim 1 has not been disclosed in the prior art. That limitation is "wherein an assembly (200) for the mounting of the core member (124) comprises a seat member (200) and a female screw-threaded split ring (202) matching the male screw-thread; and the seat member (200) is formed with a circular convergent cone shaped trough (200b) defined by a circular rim (200a) and a planar radial wall (200c), the seat member encompassing the split ring and fixedly mounted to the housing, the arrangement being such that upon threading together, the split-ring is attracted towards the abutment ring (138) and thus becomes self- tightened against the cone-shaped wall of the trough, wherein

said trough is open at at-least one side thereof allowing the split ring to be inserted thereinto by elastically squeezing same into a smaller diameter." In the claim 1 patentability analysis above, the examiner found that Sadan et al., in view of Clark et al., discloses or suggests all claim 1 limitations, including the one applicant argues.

b. Applicant argues that *Nerwin v. Erlichman*, 168 USPQ 177, 179 does not stand for "constructing a formerly integral structure in various elements involves only routine skill in the art" because it has been overruled by *Ex parte Gruden* but then provides no citation. Once a citation is supplied, the examiner will respond.

c. Applicant argues there is no motivation to combine Sadan et al. with Clark et al. The examiner's response is that Sadan et al. discloses the claimed invention except that the split ring and trough are integrated, as opposed to separable. Clark et al. teaches the separable split ring and trough. Clark et al., Figures 1 and 2, where the split ring is nut body portion 3 and ring portion 4 – and the trough is collar 6. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the Sadan et al. split ring and trough separable as taught by Clark et al., since Clark et al. states at Column 1, lines 32-44, that such a modification provides a way to join two pipe-like structures, like the recited inlet port and filter of claim 1.

Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise R. Anderson whose telephone number is (571)270-3166. The examiner can normally be reached on Monday through Thursday, from 8:00 am to 6:00 pm.

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter D. Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DRA

/Walter D. Griffin/
Supervisory Patent Examiner, Art Unit 1797